

WO 00/08472

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- 26 -

from said retractable drawer (14) to said at least one washer (17), reader (18) or incubator (16) module using a pipette means (6) having an integral clamp.

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>85.68691/004</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/GB 99/ 02425</b>	International filing date (day/month/year) <b>23/07/1999</b>	(Earliest) Priority Date (day/month/year) <b>04/08/1998</b>
Applicant <b>DYNEX TECHNOLOGIES INC. et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.  
☐ It is also accompanied by a copy of each prior art document cited in this report.

### 1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☒ Unity of invention is lacking (see Box II).

### 4. With regard to the title,

- ☐ the text is approved as submitted by the applicant.
- ☒ the text has been established by this Authority to read as follows:

**AUTOMATED IMMUNOASSAY APPARATUS WITH FLEXIBLE PICK-UP ARM**

### 5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No. 2

- ☐ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☒ because this figure better characterizes the invention.
- ☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/02425

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01N35/00 //G01N33/54

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N B01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>LITTLE J N ET AL: "RECENT ADVANCES IN ROBOTIC AUTOMATION OF MICROPLATE ASSAYS" LABORATORY AUTOMATION &amp; INFORMATION MANAGEMENT, vol. 26, no. 2, 1 November 1994 (1994-11-01), pages 89-99, XP000476920 ISSN: 1381-141X page 90, column 1, line 4 -page 90, column 1, line 10 page 90, column 1, line 19 -page 90, column 1, line 24 page 91, column 2, line 6 -page 95, column 2, line 12 page 96, column 1, paragraph 5</p> <p>---</p> <p>-/--</p>	1,2,8, 13,17-21

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

28 January 2000

Date of mailing of the international search report

03. 02. 2000

Name and mailing address of the ISA

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Authorized officer

Koch, A

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/02425

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 557 828 A (HORIZA LTD ; TAKARA SHUZO CO (JP)) 1 September 1993 (1993-09-01) column 2, line 18 -column 2, line 23 column 2, line 37 -column 2, line 54	1,8,14, 19
A	column 4, line 51 -column 5, line 19 column 9, line 37 -column 10, line 27 column 13, line 4 -column 13, line 32 column 13, line 55 -column 14, line 6 column 14, line 26 -column 14, line 27 column 14, line 49 -column 14, line 56 figures 1,3,11,14,15,19,22 ---	3-7
X	US 5 439 649 A (TSEUNG KEN ET AL) 8 August 1995 (1995-08-08) column 8, line 53 -column 9, line 37	14
A	column 10, line 55 -column 11, line 15  figure 5 ---	1-4,6, 12,18-22
E	EP 0 945 728 A (TECNORAMA SRL) 29 September 1999 (1999-09-29) column 2, line 41 -column 3, line 50 figures 1-3 ---	1,3,9, 14,19
A	DE 38 05 808 A (EUROP LAB MOLEKULARBIOLOG) 7 September 1989 (1989-09-07) column 5, line 41 -column 6, line 40 column 11, line 3 -column 11, line 41 figures 1-3,8,9,12 ---	1,8,9, 18,19
A	WO 94 14073 A (EUROGENETICS NV ; SMETS EDGARD (BE); SPRING JEAN FRANCOIS (CH); THO) 23 June 1994 (1994-06-23) page 5, line 33 -page 6, line 9	1,3,8, 11,13-22
A	page 6, line 21 -page 6, line 38	7
A	page 9, line 2 -page 10, line 1 figures 2,5,8,11 ---	2,4
X	EP 0 441 755 A (CHEMILA SRL) 14 August 1991 (1991-08-14)  abstract column 2, line 8 -column 2, line 51 column 3, line 9 -column 4, line 27 column 5, line 25 -column 5, line 47 figures 1-4 ---	22,26, 27,29, 30,32,33
A		31
X	US 3 912 456 A (YOUNG ROBERT R) 14 October 1975 (1975-10-14) column 3, line 44 -column 4, line 14 column 6, line 17 -column 7, line 2 column 7, line 57 -column 8, line 54 column 10, line 20 -column 10, line 29 figures 1-5 ---	22,28,32
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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/02425

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 3 909 201 A (MATTE CLAUDE) 30 September 1975 (1975-09-30)</p> <p>column 2, line 50 -column 3, line 48 column 4, line 24 -column 4, line 55 column 5, line 11 -column 5, line 34 column 7, line 38 -column 7, line 58 column 10, line 21 -column 11, line 33 column 12, line 31 -column 12, line 32 figures 1-5,10-13 -----</p>	<p>22,24, 28,29, 31-33</p>

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB 99/02425

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

**1. Claims: 1-21**

Immunoassay, or biochemical diagnostics device with a movable arm and flexible pick-up means comprising a clamp, the pick-up means being suitable for coupling to a disposable pipette tip and other items (like, e.g., the holder of a microplate), and the movable arm being connected to a pipette mechanism.

**2. Claims: 22-33**

Automated immunoassay device comprising a washer, reader or incubator module as well as a retractable drawer for one of the following items: a microplate, a plate holder, one or more sample tubes, a sample rack, a reagent container, a reagent rack, a control container, a control rack, and a tip rack.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 99/02425

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0557828	A	01-09-1993	JP 2761611 B	04-06-1998
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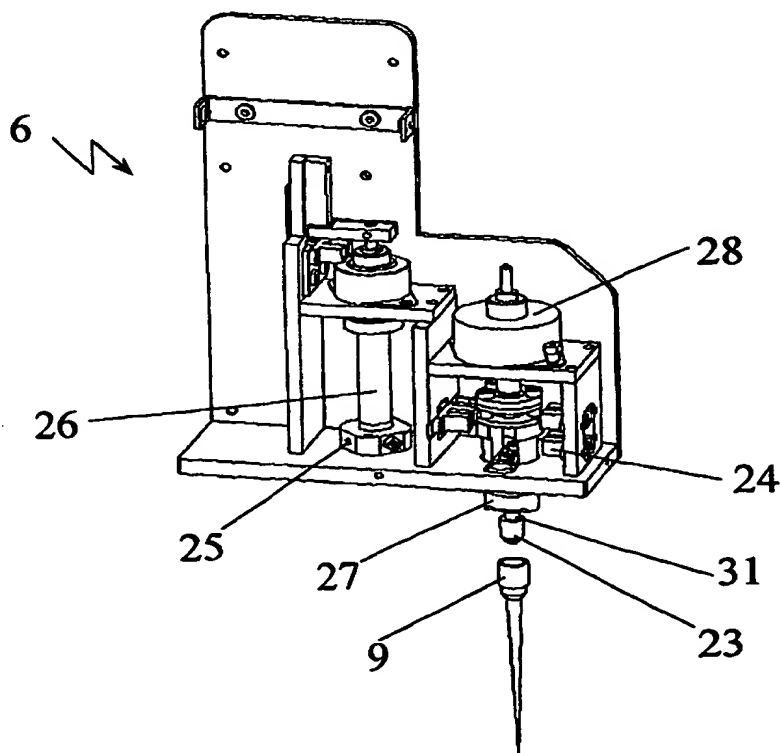
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup> : <b>G01N 35/00, 33/54</b>		A2	(11) International Publication Number: <b>WO 00/08472</b>
			(43) International Publication Date: 17 February 2000 (17.02.00)
(21) International Application Number: PCT/GB99/02425		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DE (Utility model), DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 23 July 1999 (23.07.99)			
(30) Priority Data: 9816943.6 4 August 1998 (04.08.98) GB 9816944.4 4 August 1998 (04.08.98) GB			
(71) Applicant (for all designated States except US): DYNEX TECHNOLOGIES INC. [US/US]; 14340 Sullyfield Circle, Chantilly, VA 22021 (US).			
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(74) Agent: JEFFREY, Philip, Michael; Frank B. Dehn & Co., 179 Queen Victoria Street, London EC4V 4EL (GB).			

(54) Title: AUTOMATED IMMUNOASSAY APPARATUS WITH FLEXIBLE PICK-UP ARM

## (57) Abstract

An automated sample handling apparatus is disclosed having a pipette mechanism (6) which has an integral clamp device (27, 31, 23) suitable for picking up one or more items other than a disposable tip (8; 12) such as a plate holder (35) which can carry a microplate or other consumable item(s). A retractable drawer (14) for carrying a plurality of microplates (13) is also provided.



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